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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/085,890      | 02/27/2002  | David M. Lucas       | P1695USA            | 4131             |

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| EXAMINER |
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AUGHENBAUGH, WALTER

| ART UNIT | PAPER NUMBER |
|----------|--------------|
| 1772     | //           |

DATE MAILED: 12/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                 |              |  |
|------------------------------|-----------------|--------------|--|
| <b>Office Action Summary</b> | Application No. | Applicant(s) |  |
|                              | 10/085,890      | LUCAS ET AL. |  |
| Examiner                     | Art Unit        |              |  |
| Walter B Aughenbaugh         | 1772            |              |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 26 September 2003.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1,2,4-11,17 and 18 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1,2,4-11,17 and 18 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. §§ 119 and 120

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some \* c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

13) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) The translation of the foreign language provisional application has been received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

#### Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.

4) Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.

5) Notice of Informal Patent Application (PTO-152)

6) Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Acknowledgement of Applicant's Amendments***

1. The amendments made in claim 1 in the Amendment filed September 26, 2003 (Paper 10) have been received and considered by Examiner.
2. New claims 17 and 18 presented in Paper 10 have been received and considered by Examiner.
3. Examiner acknowledges the cancellation of claim 13 in Paper 10.

### ***WITHDRAWN REJECTIONS***

4. The 35 U.S.C. 102(b) rejection of claims 1, 2, 4, 5, 9-11 and 13 as anticipated by Stevenson et al. (US 5,254,635) that was repeated in paragraph 2 of Paper 8 has been withdrawn due to Applicant's amendments in Paper 10.
5. The 35 U.S.C. 103(a) rejection of claims 6-8 over Stevenson et al. (US 5,254,635) in view of Stevenson (US 4,695,609) that was repeated in paragraph 3 of Paper 8 has been withdrawn due to Applicant's amendments in Paper 10.

### ***NEW OBJECTIONS***

#### ***Specification***

6. The amendment filed September 26, 2003 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: the pH range of "between 10.3 and 11.0" that is claimed in claim 1 and the surfactant that is claimed in claim 18.

Applicant is required to cancel the new matter in the reply to this Office Action.

***NEW REJECTIONS***

***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 1 and 18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The pH range of “between 10.3 and 11.0” that is claimed in claim 1 is not supported in the specification. The surfactant that is claimed in claim 18 is not supported in the specification.

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 1, 4, 5 and 7-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In regard to claim 1, Applicant claims an article but all of the limitations after the preamble are directed to a step of curing an intermediate product. The polyisoprene article made by curing a composition in its final form is certainly not composed of the liquid polyisoprene latex emulsion. It is unclear whether Applicant considers the polyisoprene article, a method of forming the polyisoprene article (“made by curing”) or the stable liquid polyisoprene latex

emulsion to be Applicant's invention. Also, the term polyisoprene is misspelled in the fourth line of the claim.

In regard to claims 4, 5 and 7-10, the recitation "x parts per 100 parts of polyisoprene" renders the claims indefinite. Per 100 parts of polyisoprene in the emulsion phase or in the "polyisoprene article" phase? Parts by what: by weight?

***Claim Rejections - 35 USC § 103***

11. Claims 1, 2, 4, 5, 9-11, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stevenson et al. (U.S. 5,254,635) in further view of Hirai et al., and in further view of Grollier et al.

Stevenson et al. teach a polyisoprene article made from a composition comprising a liquid polyisoprene latex emulsion comprising a liquid latex (col. 5, lines 6-12), sulfur (col. 4, lines 35-37), a thiuram compound (col. 3, lines 65-66) and a dihydrocarbyl xanthogen polysulfide (corresponding to the xanthogen compound as claimed) as a rubber-curing agent (col. 4, lines 3-7). Since Stevenson et al. teach that the rubber that is used, which is preferably synthetic polyisoprene, may be in latex or dry form (col. 5, lines 6-12), the latex taught by Stevenson is a liquid polyisoprene latex emulsion. Since Stevenson et al. teach that the xanthogen compound is a curing agent, Stevenson et al. teach a polyisoprene article that is made by curing a composition comprising a liquid polyisoprene latex emulsion comprising a liquid latex, sulfur, a thiuram compound and a xanthogen compound, but note that the recitation "made by curing a composition" is a method limitation that has not been given patentable weight since the method of forming the article is not germane to the issue of the patentability of the article itself.

Stevenson et al. fail to explicitly teach that the liquid polyisoprene latex emulsion is stable, that the liquid polyisoprene latex emulsion has a pH of between 10.3 and 11.0 and that the liquid polyisoprene latex emulsion comprises ethoxylated cetyl/stearyl alcohol.

Hirai et al., however, disclose a stable liquid polyisoprene latex emulsion (col. 2, lines 19-24) comprising an emulsifying agent (col. 5, lines 56-59) and having a pH between 8 and 13.5 (Hirai et al. disclose that the emulsion is stable between pH 8 and 13.5) (col. 6, lines 7-9). Furthermore, Grollier et al. disclose a composition comprising an anionic polyisoprene lattice (the liquid latex as claimed) (col. 1, lines 61-63, col. 2, lines 13-18 and col. 21, lines 57-59) and an oxyethyleneated cetyl-stearyl alcohol (corresponding to the ethoxylated cetyl/stearyl alcohol as claimed) (col. 14, lines 6-7). Grollier et al. disclose that emulsifying agents may be added to the composition of Grollier et al. (col. 11, line 35). Ethoxylated cetyl/stearyl alcohol is an emulsifying agent as evidenced by Watkins et al. (see col. 4, lines 14-18 of Watkins et al.).

Therefore, one of ordinary skill in the art would have recognized to have maintained the polyisoprene latex emulsion of Stevenson et al. at a pH of between pH 8 and 13.5, a range that overlaps with the claimed range of between 10.3 and 11.0, since Hirai et al. disclose that polyisoprene latex emulsions are notoriously well known to be stable at pH values between pH 8 and 13.5 and to have included ethoxylated cetyl/stearyl alcohol in the emulsion taught by Stevenson et al. and Hirai et al. since Grollier et al. disclose that it is notoriously well known to include an emulsifying agent such as ethoxylated cetyl/stearyl alcohol (as evidenced by Watkins et al.) in compositions comprising a liquid polyisoprene latex emulsion as taught by Grollier et al.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have maintained the polyisoprene latex emulsion of Stevenson et al. at a pH of between pH 8 and 13.5, a range that overlaps with the claimed range of between 10.3 and 11.0, since Hirai et al. disclose that polyisoprene latex emulsions are notoriously well known to be stable at pH values between pH 8 and 13.5 and to have included ethoxylated cetyl/stearyl alcohol in the emulsion taught by Stevenson et al. and Hirai et al. since Grollier et al. disclose that it is notoriously well known to include an emulsifying agent such as ethoxylated cetyl/stearyl alcohol (as evidenced by Watkins et al.) in compositions comprising a liquid polyisoprene latex emulsion as taught by Grollier et al.

In regard to claims 2, 4 and 5, Stevenson et al. teach that the thiuram compound is tetrabenzyl thiuram disulfide (col. 4, lines 65-68, col. 2, lines 15-22 and c ol. 5, lines 30-68). Stevenson et al. teach that the tetrabenzyl thiuram disulfide is present in an amount of 0.1 to 1.5 parts per part of the dihydrocarbyl xanthogen polysulfide (col. 4, lines 65-68), which is present in an amount of 0.5-6 parts by weight per 100 parts by weight of the rubber (i.e. polyisoprene) (col. 3, line 35 and col. 4, lines 28-31). Therefore, the range claimed in claim 4 of 0.45-0.75 parts thiuram compound per 100 parts polyisoprene falls within the range taught by Stevenson et al., as does the value claimed in claim 5 of 0.6 parts thiuram compound per 100 parts polyisoprene.

In regard to claims 9 and 10, Stevenson et al. teach that the xanthogen compound is present in an amount of 0.5-6 parts by weight per 100 parts by weight of the rubber (i.e. polyisoprene) (col. 3, line 35 and col. 4, lines 28-31).

In regard to claim 11, Stevenson et al. teach that the article is intended for skin contact and that the material is shaped into contraceptives (col. 3, lines 13-25). A condom is a contraceptive.

In regard to claim 17, Stevenson et al., Hirai et al. and Grollier et al. teach the article as discussed above. While Stevenson et al. fail to explicitly teach that the liquid polyisoprene latex emulsion has a pH in the range of between about 10.5 and about 10.8, Hirai et al. disclose a stable liquid polyisoprene latex emulsion (col. 2, lines 19-24) comprising an emulsifying agent (col. 5, lines 56-59) and having a pH between 8 and 13.5 (Hirai et al. disclose that the emulsion is stable between pH 8 and 13.5). Therefore, one of ordinary skill in the art would have recognized to have maintained the polyisoprene latex emulsion of Stevenson et al. at a pH of between about 8 and about 13.5, a range that overlaps with the claimed range of between about 10.5 and about 10.8, since Hirai et al. disclose that polyisoprene latex emulsions are notoriously well known to be stable at pH values between pH 8 and 13.5.

In regard to claim 18, Stevenson et al., Hirai et al. and Grollier et al. teach the article as discussed above. Hirai et al., furthermore disclose that the emulsion comprises a surfactant as a component of the emulsifying agent (col. 5, lines 56-67 and col. 16, line 32). Therefore, one of ordinary skill in the art would have recognized to have included a surfactant in the composition of Stevenson et al., Hirai et al. and Grollier et al. since surfactants are notoriously well known components of emulsifying agents as taught by Hirai et al.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included a surfactant in the composition of Stevenson et al., Hirai et al. and

Grollier et al. since surfactants are notoriously well known components of emulsifying agents as taught by Hirai et al.

12. Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stevenson et al. (U.S. 5,254,635), in further view of Hirai et al., and in further view of Grollier et al. and in view of Stevenson (US 4,695,609).

Stevenson et al. ('635), Hirai et al. and Grollier et al. teach the polyisoprene article as discussed above.

In regard to claim 6, Stevenson et al. ('635), Hirai et al. and Grollier et al. fail to teach that the article further comprises zinc dibenzylthiocarbamate. Stevenson ('609), however, discloses that dithiocarbamates are widely used as accelerators and curing agents for rubber goods (col. 1, lines 11-25). Stevenson ('609) discloses that zinc dibenzylthiocarbamate as a dithiocarbamate additive for latex formulations (col. 1, lines 15-19 and col. 8, lines 50-68).

Therefore, one of ordinary skill in the art would have recognized to have used zinc dibenzylthiocarbamate as an accelerator or curing agent of the polyisoprene article of Stevenson et al. ('635), Hirai et al. and Grollier et al. since zinc dibenzylthiocarbamate is a notoriously well known accelerator and curing agent for rubber goods as taught by Stevenson ('609).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used zinc dibenzylthiocarbamate as an accelerator or curing agent of the polyisoprene article of Stevenson et al. ('635), Hirai et al. and Grollier et al. since zinc dibenzylthiocarbamate is a notoriously well known accelerator and curing agent for rubber goods as taught by Stevenson ('609).

In regard to claims 7 and 8, Stevenson et al. ('635), Hirai et al. and Grollier et al. fail to teach the claimed zinc dibenzylthiocarbamate amounts claimed in claims 7 and 8 of the instant application. Stevenson ('609), however, disclose that 0.2 parts zinc dibenzylthiocarbamate are added to 100 parts latex (col. 8, line 68). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have adjusted the amount of zinc dibenzylthiocarbamate added to the polyisoprene to 0.3-0.5 parts (including 0.4 parts) per 100 parts of polyisoprene in order to achieve the optimal acceleration or curing results depending on the particular desired end user result through routine experimentation, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art in the absence of unexpected results. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

#### ***ANSWERS TO APPLICANTS ARGUMENTS***

13. Applicant's arguments on pages 4-7 of Paper 10 are rendered moot due to the new ground of rejection presented in this Office Action. Applicant's arguments are based on Applicant's assertion that the previous Office Actions "incorrectly state[] the law of anticipation". Whether or not the claims are anticipated under 35 U.S.C. 102 is no longer at issue.

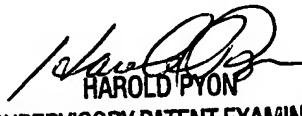
#### ***Conclusion***

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter B. Aughenbaugh whose telephone number is 703-305-4511. The examiner can normally be reached on Monday-Thursday from 9:00am to 6:00pm and on alternate Fridays from 9:00am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached on 703-308-4251. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

wba      WBA  
12/09/03

  
HAROLD PYON  
SUPERVISORY PATENT EXAMINER  